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The

# of CORPORATION SCHOOLS BULLETIN

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Volume IV

October, 1917

#### WAR AND THE WOMAN WAGE EARNER

In this issue of the BULLETIN is presented the first compilation of data relative to the condition of women wage earners of the United States as affected by the war in Europe. Seventy large industrial corporations, covering most of the leading industries of our country, have contributed information which is included in the article.

This is the second of a series of articles which will appear in the BULLETIN dealing with "personal relation" problems. The first article, "Co-operation Through the Corporation Store," appeared in the September issue. Similar articles on company hospitals, company restaurants, corporation thrift associations, recreation activities, etc., will appear in early issues.

PUBLISHED BY ORDER OF THE EXECUTIVE COMMITTEE

# The National Association of Corporation Schools

Executive Office, 130 East 15th Street, New York City

# Class A Members-Continued

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The National Association of Corporation Schools

# BULLETIN

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No. 10

#### UNIVERSITY TO DEVELOP INDUSTRIAL EDUCATORS

The demand for competent men to fill positions as directors of corporation schools and also the demand for competent instructors in industrial educational courses has been much greater than the supply. The demand has enlarged as the necessity for industrial preparedness has become increasingly apparent. Realizing that present conditions do not develop men competent to assume these positions our Association requested New York University to put on courses designed to train directors for industrial educational courses, thus providing a source through which the demand may be met.

The faculty of the university met this request in its usual spirit of willingness to be of service to the industries of our country and a course has been outlined and enrollments are now being received. The courses will consist of instruction five evenings per week and will include the regular university courses of "Methods of Instruction, "Educational Psychology," "Labor Management," "Advanced Business Management," and a special course under the direction of Mr. Henderschott, Executive Secretary of our Association. The entire course is outlined on another page of this issue. While our Association is under no financial obligations in connection with the courses, our members are obligated to use their best efforts to secure suitable candidates for enrollment in the courses. Enrollments may be made either direct with New York University, Washington Square East, New York, or through the Executive Secretary's office.

There are a considerable number of industrial corporations which are willing and ready to inaugurate educational systems on

behalf of their elmpoyes, but the work is delayed because suitable directors cannot be obtained. The best interests of our Association require that a constant propaganda be carried on to interest corporations not now having membership in our Association in the work which is being done, but the movement will be hampered until there is means through which competent industrial educational directors may be developed.

After the course has been instituted and tested at New York University, it is the hope of the Executive Committee of our Association that similar courses can be inaugurated in universities in other parts of the United States.

#### WILL WOMEN ASSUME MEN'S WORK IN INDUSTRY?

During the past few weeks several requests came to the Executive Secretary's office for information "as to what extent women are replacing men who have been called into military service."

A questionnaire was forwarded to all our class A members and the response has been full and hearty. Elsewhere in this issue will be found an article giving the substance of the information received. A résumé of the information gathered indicates that it has not been found necessary as yet to substitute women to any considerable extent in positions formerly filled by men. The average increase in female employes has not exceeded 10 per cent. and in almost every instance the increase has been in positions in which women have been employed even before the war. It is evident that much of the publicity both through the press and the film companies which have shown women engaged in such work as locomotive engineering, mechanics positions and similar laborious tasks is without foundation in fact. The writer recalls a film recently displayed in which women were shown doing repair work on freight cars, and another scene showing women painting a sign on a wall high up on a skyscraper. Careful investigation developed the fact that the women in each instance were actresses regularly employed by the film company.

Should the war continue for a considerable period, there is little doubt but that women will be forced into industries to a greater extent than prior to our country's entrance into hostilities, but there is no likelihood that the United States will repeat the mistake made in England.

There is much interesting information in the article, and so far as the writer is advised, it is the first compilation of information on the subject to be published.

Opinions differ widely as to the value of the services of women as compared to similar services by men. Some definite figures are given which will be of value for comparative purposes. One large corporation operating in all sections of the United States and employing large numbers of women gives its average absences from duty as from 3 to 5 per cent. Our members can make a comparison of their own conditions in this respect and arrive at a definite conclusion as to whether absences on account of illness and other causes is too great and, if found to be larger than the average as given, remedies should be applied.

The writer has knowledge of one large corporation in the east which was able to reduce absences on account of illness on the part of its female employes over fifty per cent, through a series of lectures given by a woman doctor on health topics. Another manufacturing corporation in the New England district states that where women successfully perform the duties formerly carried on by men the same rate of wage is paid. This is interesting. Another corporation located in the middle west gives as its judgment that women are more inclined to be "agitators" than men, but this statement is frankly contradicted by another employer in the middle Atlantic states who believes that women are more loyal and more dependable than men.

It could hardly have been expected that a preliminary effort to compile data of this character would bring out much definite information, but the opinions expressed are interesting and it is very evident that up to the present period there are sufficient male employes in the United States to conduct all of the work commonly considered too laborious for female effort.

If our members will keep the BULLETIN advised of additional movements of this character, publicity will be given and all our readers will no doubt profit as a result.

#### UTILIZING ALL OUR EDUCATIONAL FACILITIES

Governor Edge, of New Jersey, recently issued a request that school work in that state should not be neglected because of the war. This request was supplemented by a special appeal on the part of the state commissioner of education, Calvin N. Kendall, to the school officials, teachers and general public, in which he claims that the school is the one organized institution for making America safe and capable for democracy.

In his appeal, Commissioner Kendall says: "I especially call the attention of school boards, school officials, parents and the public in general, to the extreme importance of maintaining schools of all kinds—kindergartens, elementary schools, high schools, colleges, universities, technical and vocational schools—at the highest degree of efficiency during the coming year.

"At this time of national stress and crisis the school should do its great work in the preparation of our future citizens—not less well than heretofore, but even better than in the past. It is a truly patriotic service for boards of education, administrative officials and teachers to work to this end. It is a like patriotic service for parents and the public to help these administrative officials and teachers make the schools more useful than ever before. After the war is over the demand will be greater than ever that the great mass of our people be fitted to solve the problems and to meet the new conditions the future has in store for us. In times of war it is well to prepare for times of peace."

Supplementing what New Jersey's educational commissioner has so well pointed out, every community should take full advantage of such educational facilities as are available. On behalf of those who have not the time and opportunity to attend day courses, special attention should be given to evening schools, continuation schools, part-time classes and where available Y.M. C. A. courses, and an earnest effort should be made by every employer to interest his employes in the possibility of increasing their personal efficiency through the correspondence schools, such as the International Correspondence Schools of Scranton, the Alexander Hamilton Institute, LaSalle Extension University of Chicago, the Business Training Corporation of New York and

the Sheldon School of Salesmanship, all recognized institutions of character and merit. Many workers, who have passed the age for elementary education, who have responsibilities which prevent giving up their days to educational effort, may still increase their knowledge and become more capable and better citizens by devoting a certain amount of their evenings to courses which are supplied by the institutions mentioned above. Advantage should be taken of every educational opportunity. Those who cannot attend the public schools and secondary schools should avail themselves of such methods of securing a better education as are at their command.

#### PLANNING A CAMPAIGN FOR ADDITIONAL MEMBERS

The National Association of Corporation Schools has become a national institution. It has achieved a four years' record of commendable accomplishment. To further extend its usefulness additional class A members are needed.

There are a considerable number of industrial corporations that would institute training systems on behalf of their employes if fully advised of what our Association stands for and what it has accomplished. Our Association requires additional revenue to carry out its larger program of work; the placing of investigators in the field to gather information necessary in solving the problems which have been delegated to our committees. Our Executive Committee has outlined a splendid program of work, a program when carried out that will mean progress in the solution of the perplexing problems which now exist in the industries of our country. The problem of fitting the new employe into the right environment; the problem of promotion and financial reward; the problem of training the individual that he may realize his larger measure of success; the problem of minimizing labor troubles; the problem of health among the workers, and similar problems which have been neglected in American industries.

To insure the success of the program of work which has been approved, additional revenue is required and additional class A members are desired. The new members will provide the revenue with which to make this program of work effective. At

the Buffalo convention the members of the Executive Committee pledged themselves to secure thirty-seven new class A members. Not to be outdone by its officers the class A representatives at their business session at the convention severally pledged themselves to secure sixty-three additional new class A members. making a grand total of one hundred.

To aid these loyal and earnest members, the Executive Committee at its meeting in New York on September 4th, appointed a special membership committee with Mr. H. A. Halligan, Senior Vice-President of the Western Electric Company as chairman. Mr. F. L. Devereux, Auditor of Long Distance Lines of the American Telephone and Telegraph Company, has accepted the position of secretary to the committee.

The members of the Membership Committee of our Association will also be members of the new committee. The special campaign to secure the additional one hundred class A members will be inaugurated just as soon as plans can be worked out and every member is asked to co-operate. Please forward at once to the Executive Secretary's office the names of industrial institutions eligible for class A membership and the name of the particular officer who should be solicited.

The campaign has been carefully prepared and with the earnest co-operation of all our members will surely result in a splendid advancement of the work of our Association.

# Educational Census Shows China's School Equipment

Of late years, with the introduction of Occidental ideas and influences, China's educational facilities have been materially increased. In proportion to its vast population, however, the country has but few schools and extremely few institutions of higher learning. Recent statistics show that only nineteen colleges are open to those who want general courses. Added to these are eight engineering, four medical, fifty-nine law and ninety-one industrial and technical schools. Of primary and secondary schools there are 53,204, aside from 527 primary and middle schools maintained by some of the more advanced institutions. Ninety-three public seminaries, 507 normal schools and 357 schools for girls are supported in addition to 1582 half-day schools.

#### THE PRESIDENT'S PAGE

Just a word to the representatives of Class A companies. Study of the information which you have been sending indicates, frankly, that the systematic development of employes through educational means has "taken only in spots." There are enough tested methods and plans in the reports and proceedings of our Association to solve many of the present urgent needs of business in dealing with their personnel problems. We Class A representatives must remember that we are company representatives and not simply serving the department in which we are employed.

Serving on the Association's committee this year is some of the best talent in the country—men recognized as authorities and leaders in their work. The service of these committees as advisory counsel is available. We are not getting full value from the Association if we do not put up to them some of the problems of the various branches of our companies.

The Association service is of no value unless it is used. One of the best things we can do right now is to make sure that all branches of our own companies are absolutely solid on the ideas for which the Association is striving.

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# MEETING OF EXECUTIVE COMMITTEE

At the September Meeting it was Decided to Make a Special Campaign for New Class A Members-Mr. H. A. Halligan, Senior Vice-President of the Western Electric Company, will be Chairman of the Special Membership Committee-Mr. Mehren Reports for the Publication Committee-Mr. Dooley Gives an Outline of the New Course at New York University Designed to Train Industrial Educational Directors and Instructors.

President Dietz presided at the September meeting of the Executive Committee held in New York on the fourth. First Vice-President Rowe, Second Vice-President Kincaid, Secretary Galloway, Treasurer Mehren and Messrs, Dooley, Wright, Park and Executive Secretary were also present.

Treasurer Mehren submitted a report showing cash on hand as of September 1st, of \$2,986.36 and no liabilities.

The Executive Secretary presented a report showing an increase of one class "A" member, two class "B" and five class "C" members, since the last report to the Executive Committee.

The Executive Secretary presented a letter from Mr. A. L. Salt, vice-president of the Western Electric Company, Inc., in relation to the work of the Freight Car Thrift Committee of the Railway Business Association. Upon motion the Executive Secretary was instructed to give publicity to the contents of the letter in the October issue of the Association's BULLETIN.

Upon motion, Mr. Wright and Treasurer Mehren were delegated to act as representatives of our Association at the conference called by the Chamber of Commerce of the United States to be held in Atlantic City during the month of September. They were instructed to render a report and to recommend as to the advisability of our Association becoming more closely identified with the work of the Chamber of Commerce of the United States.

First Vice-President Rowe, as chairman of the Committee on Co-operation with Other Organizations, was instructed to investigate the matter of membership in organizations with which a our Association could profitably co-operate-organizations of the character of the National Chamber of Commerce and the National Civic Federation were specifically mentioned.

# Report of Publications Committee

Treasurer Mehren, as chairman of the Publication Committee, reviewed the manner of gathering the material for and issuing the bound volumes of proceedings of the annual conventions and also the matter of editing and publishing the Association's monthy Bulletin. Mr. Mehren gave as his opinion that a study might be made in connection with the proceedings of future conventions with a possibility of adopting some other form but that the present volume should be issued as in the past. Mr. Mehren also stated that the Association's monthly Bulletin could be improved but that it would probably involve additional expense, which the Association might not be in position to undertake at this time. In co-operation with the Executive Secretary, Mr. Mehren will further study the matter of the Association's publications and work out such improvements as can be made at this time with such funds as may be available.

#### Campaign for New Class A Members

Second Vice-President Kincaid, as chairman of the Membership Committee, submitted the following report:

To the Executive Committee:

Your Committee on Membership, after giving due consideration to ways and means of increasing our membership, would recommend the following:

First: That a Special Membership Campaign Committee, headed by an Executive of one of our largest and best-known industries, be appointed.

Second: We recommend the appointment of Mr. H. A. Halligan, vice-president of the Western Electric Company, Inc., as Chairman, and Mr. F. L. Devereux, auditor of Long Lines Department, American Telephone and Telegraph Company as Secretary, and that this committee shall include the members of the present Executive Membership Committee, with President Dietz and Secretary Henderschott as ex-officio members, both agreeing to take an active part in the campaign for new members.

It is also recommended:

First: That we make a vigorous campaign for class "A" members, among corporations and firms eligible to membership in that class, for a period of one month—say, during the month of October or November.

Second: That we follow this up with a campaign of one month, say, the following month, for class "C" members.

It is understood, according to our Constitution, that companies and firms having less than 1,000 employes, and larger corporations at present not having apprenticeship schools but who can be interested in the work of our Association sufficiently to take out a class "C" membership, are eligible as class "C" members.

Third: As the opportunity for the work for which our Association was organized seems to expand and widen at the present time, your committee would recommend that we follow the two special efforts, for class "A" and class "C" members, with a third campaign to enlarge our class "B" membership. It seems especially desirable, considering the demands likely to be made upon our Association during the present World War and the prospective opportunity for the particular service which we are able to render in the reorganization and re-construction of industry and business at the close of the war, that we should have, active in our membership and co-operating with us, the largest possible number of individual members, with full knowledge and in full sympathy with the aims and objects of the Association, who will be ready and willing to render indispensable service to corporations throughout the nation.

Fourth: It is recommended that this committee shall enlist the co-operation in this campaign of those members who, at the recent Buffalo Convention, pledged themselves to secure 100 new members for the Association.

President Dietz advised that Mr. Halligan, vice-president of the Western Electric Company, Inc., would accept the chairmanship of the Special Membership Committee and conduct the campaign, and that Mr. F. L. Devereux, auditor of Long Lines Department of the American Telephone and Telegraph Company, would accept the secretaryship.

Upon motion of Secretary Galloway, seconded by Mr. Dooley, the report of the Membership Committee was approved.

# Report of Committee on Training Educational Directors

Mr. Dooley, as chairman of the Committee on Training Educational Directors, submitted the following report:

Following some preliminary correspondence during the summer, the first meeting of your committee was held in the office of Mr. Henderschott, Tuesday morning, September 4, 1917. Dr. Galloway was unable to be present.

Mr. Henderschott presented an outline of the proposed course, covering some twenty pages and going extensively into the details of the sub-division. The main divisions are as follows:

A. Studying and classifying the employes for the purpose of determining the number and kinds of courses neces-

sary to properly meet the training requirements of the corporation.

B. Preparing a report to cover the classification of employes for educational purposes.

- Organizing and instituting preliminary educational courses-those courses for which there is the more immediate need-instructors, rooms and equipment, textbooks-determining hours for courses, methods of examinations—use of motion pictures and slides.
- Developing and extending the educational work to include taking advantage of the established educational institutions of the community—the public school, day and evening; high schools, day and evening; Y. M. C. A. courses, if any, etc.
- E. Character building.
- F. Correlating the educational work with employment, safety and welfare activities and determining methods.
- G. Devising a system of personal records—promotion, demotion, discharge, training bureau, etc.
- H. Forming an alumni association where enough employes have graduated to justify the movement and determining the activities of such an organization.
- Special lectures.
- J. Vocational guidance.

This course will be offered together with four other courses which are now among the standard courses regularly offered by New York University. These four courses are as follows:

- 1. Methods of Teaching.
- 2. Educational Psychology.
- 3. Labor Management.
- 4. Advanced Division of Business Management.

The following is the general scheme of operation:

- 1. New York University will offer the course,
- 2. Dr. Galloway, in charge of the Business Management Department of the University, will have general supervision of the course.
- 3. Mr. Henderschott will have direct charge of the new part of the course which is being developed. This course will be given in a series of lectures occurring one evening per week. Mr. Henderschott will give these lectures in the main, but he may call for assistance in some lines from some of the members of the Association.
- 4. The Association will be under no financial obligation

- whatsoever, but our Association is under a moral obligation to use its best effort to secure a satisfactory enrollment and in every way to assist in making the course a success.
  - 5. The committee as a whole will follow this experiment at New York University very closely all winter.
  - The committee will further advise as to future extensions of this training in other universities where it is hoped it may be inaugurated next year.

Dr. Galloway supplemented the report with the suggestion that he believed a summer conference could be given in connection with this course comparable to summer school courses given by colleges and universities. Upon motion the report was unanimously adopted.

Mr. Dooley also reported on a conference which he attended in Washington, the subject of which was the "Re-education of Crippled Soldiers." Upon motion of Mr. Henderschott, Mr. Dooley was authorized to advise Major Edgar King, of the War Department, who has this matter in charge, that our Association is anxious to co-operate with the War Department in every way within its scope and authority.

The Executive Committee then adjourned to meet Tuesday, October 2d. in New York.

# Canadian Province to Make an Educational Survey

Closer and friendlier relations between the United States and Canada springing from the war alliance is responsible for the appointment of two American educators by the Premier of Saskatchewan to make an educational survey of the Canadian province.

Prof. Harold W. Foght, one of America's most widely known specialists in rural education, and W. Carson Ryan, of Nutley, N. J., who is connected with the Bureau of Education at Washington, will do the work.

The Canadian province has appropriated \$10,000 for this investigation, which will be the first inventory ever taken of the educational resources of Saskatchewan. The Canadian authorities have been taking note of the educational surveys conducted in the United States, and when it was decided to have a complete educational system outlined for Saskatchewan, which is practically a new province, it was decided to establish the innovation of calling for American help.

# WAR AND THE WOMAN WAGE EARNERS

Women Workers in the United States Have Not as Yet Approached the Condition of Their Sister Workers in English Industries-Information and Comment Received from Seventy of Our Class "A" Member Companies Indicate Great Care Will be Exercised to Prevent, Through Stress of Industrial Needs, Conditions Which Would Jeopardize Health or Cause Regret.

It is the conviction of H. G. Wells that we must already look back to the opening half of the year 1914 as to an age gone forever. "Except that we were all alive then and can remember, that time has now become almost as remote, almost as 'historical,' as the days before the French Revolution: Our days, our methods, our reactions are already so different. The greater part of the freedom of movement, the travel and going to an fro, the leisure, the plenty and carelessness that distinguished early twentieth century life has disappeared. Most men are under military discipline and every household economizes."

But in no respect is the distinction between the periods immediately preceding and since the war sharper than in the economic position and prospects of women. The estimate of their economic importance has become completely revolutionized. It is true that in the opinion of many thinkers the war has merely brought about, with the rapidity of a landslide, a state of affairs for which the world was ripe. Nevertheless, the very suddenness with which the condition has been evolved has created its own problems, and the world has no recourse but to adjust itself as soon and as harmoniously as possible, to the extension of women's employment, and to the increase in the proportion of self-respecting, self-supporting women. Europe is in the throes of this adjustment; America faces it. To what extent are we prepared for the emergency?

# Substitution of Female for Male Labor in Europe

Since the beginning of the war, in Great Britain alone, almost a million women have been added to the wage earners. Beside the traditional and expected service in nurture and nursing, and every sort of relief and charitable activity, they have replaced men in nearly every conceivable type of work. They are relieving male labor in industrial, commercial and professional occupations, in agriculture, in transportation and in civil service. They are directly substituting for men even in mining and quarrying.

Considerable numbers are engaged in the metal industries, often in processes involving excessive physical strain. One of the principal increases has been in railway work, including not only carriage and locomotive cleaners, but also hundreds of porters and laborers in workshops. Municipalities are employing women in power stations, on sewage farms, in gas works, in parks, and in road cleaning and scavenging. The productive capacity of the farming districts has hardly been reduced to any appreciable degree, we are assured, and in manufacture they are being used on a heroic scale. They have even gone into the banks. One bank in Berlin has 500 women on its staff, recruited largely from the export trades.

In Great Britain the number of women and girls employed in grain milling increased from 2,000 to 6,000 between July, 1914 and July, 1916; in sugar refining from 1,000 to 2,000; in brewing from 8,000 to 18,000.

It was with the above and similar considerations in mind that your Executive Secretary decided to address to members of the Association a questionnaire covering the attitude and degree of preparedness to cope with the inevitable influx of woman labor on the part of employers of wage earners on a large scale in this country. The following is a digest of the seventy answers received from our class "A" members:

#### Situation Not Yet Acute

In the first place, there seems to be practical unanimity among the correspondents in their apparent desire not to borrow trouble by the formulation of any very definite policy. Only a comparatively small percentage admitted having given the matter any very serious consideration, and less than half the number had added any additional women to their staffs of employes, beyond a normal increase in no way attributable to war conditions. Moreover, in cases where there had been an increase of women workers, as a direct result of military necessity, the percentage has been, as a rule, very small. It is true that one firm professes to have added 143 per cent. more women to its force than it had employed prior to the war, and another manager computes the increase of women wage earners in his company at 75 per cent. In the majority of other cases, however, the increases range between 1 and 5 per cent.

In answer to the second question, covering any unusual type of employment in which the service of women had been found satisfactory, all the companies distinctly stated that thus far they had not found it necessary to put women into positions heretofore generally considered as exclusively within the province of men. Female labor has merely been employed to substitute for male labor in work which might have been done at any time by women, had managers not preferred to make use of such positions either as schools for future executives or with some other purpose in view peculiar to individual companies. With the exception of cutting out garments, designing, canvassing, and running machines involving comparatively little physical strain—work always recognized as entirely within the physical capacity of women—practically all the substitutions have been in the way of general office work.

As might have been expected, the majority of the managers answered the question as to the ultimate retention of women in the positions in which they might now be regarded as only substitutes, somewhat evasively. Either it is too soon to tell, it depends entirely upon future developments in labor conditions, and so on. Only one or two make the definite statement that if the women make good, they may be sure of retention after the war.

Again, there is a surprising degree of unanimity in the general commendation of women workers. While it is true that most of the executives find them less dependable in the way of general health and consequent attendance, and that the probability of marriage and early withdrawal must always be considered, these drawbacks would appear to be more than offset in the minds of employers by a general unassailability of record for punctuality, adaptability, general trustworthiness, native ability, and a disposition to study and prepare themselves for the service to be rendered. There is general agreement also as to their equal if not superior steadfastness and loyalty—particularly in evidence in women over twenty-five. Indeed, one of the correspondents—with experience on both sides of the Atlantic—has been so definite in this connection as to justify quotation:

"In either case, men or women, the quality of service depends so largely upon the character and personality of the individual that we find it difficult to generalize. We feel, however, that during the present war it has been almost universally demonstrated that women, when given larger responsibilities in commercial life, have risen nobly to the various tasks assumed by them, and that they are making good to a much larger extent in every field of human activity than it was formerly believed they could.

"Our advice to firms which have formerly employed men exclusively would be—Don't be afraid to employ women, but be careful in your selections. Be sure that you are selecting women of character and ability who will be able to withstand the temptations of this more public life, and you will be satisfied, if not happily surprised, at the results which you will obtain."

One or two managers have preferred to replace their losses by men of inferior calibre, but this would appear to be the unusual attitude.

# Tendency to Increase the Number of Women Employes Without Reference to the War

Rather aside from the direct purpose of the questionnaire, but clearly revealed in the answers to it, were the indications of a distinct tendency toward increasing the percentage of women workers without any reference to present conditions—at least in regard to the war. A very large number of the answers contained the definite statement that it had become the settled policy of this or that company to raise the number of its women employes, irrespective of any necessity for so doing.

In this regard the example set by the Pennsylvania Railroad Company is almost startling. Following the decision reached by the management last Spring to open avenues of employment for women and girls in as many lines of work as possible, more than two thousand have entered the service of the lines east of Pittsburgh and Erie in the operating department alone. The total number of girls and women at present working in the operating department is 2,360, and the greater part of these have been employed in the last two months.

Among the forms of railroad service now being performed by women, to which more than ordinary interest attaches, seventy-one signal-women are at work and six student signal-women are on the payrolls. In addition there are 4 women locomotive dispatchers, 19 station cleaners, 206 car cleaners, 2 draftswomen, 104 messengers, 20 student messengers, 10 extra messengers, 23 station agents, 1 ticket seller, 3 bureau of information attendants, 1 pump attendant, 42 block operators, 2 machine hands, 5 street watchwomen, 5 upholsterers, 1 parcel room attendant, 12 draw-bridge tenders, and 18 store attendants.

In the lines of work more customarily followed by women there are 433 telephone and private branch exchange operators, 84 matrons, 29 janitresses, 2 stewardesses, 78 stenographers, 1,102 clerks and 1 cook.

In order to convey a more definite impression of the results

of the questionnaire, and also to bring out more clearly the emphatic differences of opinion and policy that must inevitably tend to put obstacles in the way of any really satisfactory adjustment of this imminent and very serious problem, it has been adjudged advisable to give a few of the more representative answers in full.

#### Percentage of Increase of Women Employes Since the War

The first question read as follows: "What is the percentage of increase of women employes in your company since the United States entered the war?"

To this question two public service companies, each employing hundreds of employes, and each of which is a household word in New York City, with many other characteristics in common, have given these widely separated replies: In the one case, "About seventy-five per cent (75%)," and in the other, "There has been no appreciable percentage of increase of women employes." The highest percentage, however, has been reached by an eastern oil company with an increase of 143 per cent.

#### Unusual Types of Employment for Women

The second question read: "State any unusual employment in which you have found the service of women acceptable, and give such details as will be of interest to other members of our Association."

This question elicited, among others, the following replies: "We hardly think you would claim it as 'unusual' employment, but we have found that young women can operate machines, such as arithometers and addressograph machines, with more speed than male help, and we have also found them more efficient and courteous in answering telephone messages in our various departments." (A well known Gas Company.)

"The only instance I can recall is in the case of handling the photostat machine, which heretofore has been operated by boys. I have had previous experience with girls in this work and know them to be more satisfactory than boys. Therefore, when our operator enlisted we replaced him with a young woman and she is doing very good work. We are also attempting to break in women in our underwriting work, but it is too early yet to say whether this work can be done well by women, as it is highly technical and involves a good deal of knowledge of field conditions which is difficult to obtain by the other sex." (An equally well known insurance company.)

"We are now employing women successfully in our cutting room, work which formerly was entirely done by men, and expect to continue to have this work done by women even after the

war. To make this change it was necessary to use mechanical devices to lighten the work, so women could stand up under the physical strain." (A Corset Manufacturer.)

"In one or two of the departments where boys were employed at making caps and spouts for oil cans, we have employed girls to take their places with considerable success, although the number is small. It is very doubtful if we will go much further than extending the employment of women in these two branches, as most all of the work at our plant is so heavy and dirty that women would be considered unfit for it at the present writing, although, of course, it is not unlikely that like England and France, our opinions will change as time goes on." (An Oil Company.)

"In studying the way in which women could replace men, if necessary, the welfare of the employe and the reputation of the firm were carefully considered, with the result that the decisions relative to replacing men by women were based on the following considerations:

- 1. Weight to be lifted.
- 2. Reach.
- 3. Whether the position be standing or sitting.
- 4. Continuous nervous strain.
- Whether the sexes would be brought into undesirable association.
- 6. General question of fatigue.
- 7. Equal pay for equal work.

Those points have been followed religiously in all the replacements we have made. The only changes in equipment we have made thus far have been in providing seating arrangements at work where men formerly stood up, and also gradual extension of rest periods. Thus far we have been quite successful in replacing men with women and expect to continue our program in that direction as the continuance of the war may demand." (A Mail Order House.)

"We have made a very exhaustive investigation as to possible unusual employment, but thus far have not actually started any women in along these lines, except upon the assembling of guns, which they have never done before." (A Manufacturer of Munitions.)

#### Retention of Women After the War

The following are representative types of answers to the third question, reading: "To what extent will you retain women

in new positions after the close of the war, in so far as you are able to determine at this time?"

"We do not know to what extent we will retain women after the war as it will depend entirely upon later conditions." (A Leather Manufacturer.)

"Owing to the frequent resignations by marriage, etc., and the steady growth of our business, probably most if not all of the women clerks employed, who prove competent, will be retained. We do not make a habit of encouraging temporary clerks." (An Insurance Company.)

"The extent to which we will retain women in new positions after the close of the war depends almost entirely upon how long the war lasts. From the changes we have made thus far, we would most likely retain the women. When we decided to begin to systematically extend women's work, and to take women in place of men, we took every activity in the house and classified it on the basis of three, thus:

- 1. All positions where women could be used readily instead
- 2. Positions at which we replace men by women, if conditions became serious.
- 3. Positions at which we would replace men by women only in case of absolute necessity—such positions would be driving teams, trucks, etc.

For my own opinion I do not think there will be any serious difficulty in this process if the war lasts only a short time. The longer the war lasts, the slower the readjustment after the war." (A Mail Order House.)

"As far as we are able to determine at this time, all women who may replace men will be retained in the service on the basis of efficiency and merit as in the case of other employes." (A Telephone Company.)

"In some of the departments in which we have placed young women, we feel that we will retain their services after the close of the war. At the same time, if male help is available, we expect to gradually replace female help with male help. Enlisted and drafted employes are entitled to their former positions as we may be able to re-engage them." (A Public Service Company.)

# Efficiency of Women as Employes

But the widest divergence of opinion was called forth by the fourth question: "Give any additional information such as attendance records; attitude toward work, etc.; that is, do you find

women stay away from work more than men; do they have an attitude of loyalty greater than that of men employes, or have you found their attitude in this respect to be less than that of men employes?"

To this we have such replies as the following:

"We have found that in matters of attendance, attitude toward work, and lovalty, women employes average a better percentage than would be obtained of men employes in the same positions." (The Secretary of the Employment Board of a large Shipbuilding Company.)

"It is the general opinion that women do stay away from work more than men and that, in this town at least, they possibly have an attitude of less loyalty than that of men employes. It has been my experience that it is usually essential to carry a few extra girls beyond the absolute minimum required to replace some who are almost sure to be out every day." (A Small Arms Company.)

"We find that women are, if anything, less inclined to lose time than the general run of men that are now available. I do not know that they show any greater loyalty, but they are probably less inclined to become agitators." (A Manufacturer of

Electrical Appliances.)

"Women absent themselves oftener and for a longer time from our offices than men. They do not wish to stay after office hours to finish their work. They cannot speed up their work as well as men when required. In our commercial offices, we found that men show more ambition and desire for promotion, as a rule. In the last few weeks we have sent some of our women employes to their homes in taxicabs, and we have been compelled also to call in a physician on account of sickness." (A New York Public Service Corporation.)

"In our work we do not find girls more fit in any one branch of the work than the men, but the fact that women are more contented and stay satisfied, is a factor in placing them on certain kinds of work. We make no distinction in our institution; a woman being able to hold as big a job as a man if she qualifies. We always find the women very willing workers. Frequently we have sent out calls that meant a great deal of overtime during uncomfortable periods, and it has surprised us to see the lovalty with which the women have responded to these calls-willing to make any sacrifice to complete a job." (An Insurance Company.)

"In all the ways you mention women are superior, I think,

to men, except with respect to their continuance in service. As a rule, women are not absent from employment unless they have a good reason for it, although it is true that perhaps they actually do lose more time in a year than men because of their sex. The average of loyalty is greater than that among men, but one disloval woman is worse than a half dozen men, because she will take every opportunity to spread the disease. My experience is that women as a class are harder to handle than men except under quite strict discipline, but they are more amenable to control." (A Prominent Publisher.)

"The women, that is those over twenty-five years of age, will equal the men as to loyalty, attendance, etc. The girls, as a whole, are not so reliable. Like dynamite they have to be handled carefully and do at times cause those in charge of them considerable trouble." (A New England Manufacturing Company.)

"For a considerable number of eastern cities I find the attendance records show that daily absences amount to from 2 to 5 per cent. of the operating forces, which I think is representative of the attendance of our women employes generally, and is somewhat greater than the percentage of absences among the men." (A Telephone Company.)

"Our statistics show that our women employes lose an average of 5 per cent. of the total labor hours per week, while the men lose 21/2 per cent. We feel, generally speaking, that the attitude of loyalty is greater among men than women. The cause for this is, as we see it, that girls, in general, look upon employment in industry as a temporary status, looking forward, usually, to marriage. We do find, however, that women employes who have been with us for periods of fifteen years or more become as loyal as many of our men." (Another New England Manufacturing Concern.)

"Women make very good employes. They are regular in their attendance, do their work well, and, when they are able to turn out as much work as men, they receive the same pay in our plant. We do not know that there is any difference in the loyalty of the men or women employes." (A Tanning Company.)

As the fifth question: "Give any unusual incidents that have developed in your company, or any information that would be of value to other members," elicited no replies, it is evident that the conditions are too new to have resulted in any untoward or other sort of consequences which could serve as either guides or warnings to other companies.

The questionnaire covered nearly every type of industry,

and whereas, as was anticipated, the answers were more or less vague and conjectural, in harmony with the comparative novelty of the situation, nevertheless, they may well be considered representative of the present general attitude toward the situation. The last census indicated that there was, at the time it was taken. a ratio of slightly over four men to every woman employed in the United States. What ratio the next ten years will bring about is largely problematical, but at all events the question is big with possibilities.

#### The National League of Women's Service

For several months a national organization, having the ambitious object of enlisting the service of all women for aid in wartime has been getting under way in New York City.

Among the things this organization—which is to be known as the National League for Women's Service—expects to work for ultimately, are a registry of the woman power of America, and a women's bureau under the Federal government "to deal with women's work and women's welfare." Several other organizations with similar aims have either merged with or are co-operating with it.

Its immediate purpose, however, is to devise and standardize ways in which women's work in war-time may be made both prompt and efficient. England's experience in utilizing women in the present war is being taken as a guide. The league hopes to organize the women of the United States so thoroughly that they may be prepared beforehand to do as much and more than the women of England have learned to do during three years of fighting.

Testimony from abroad is abundant that at every sort of occupation hitherto more or less closed to women-at clerking, at shopkeeping, railway work, automobile driving, agricultural work, police work, etc.-women have been found efficient and intelligent quite beyond precedent; while in the munition factories, and in the handling of heavy and often difficult machinery, in adaptability, inventiveness, enthusiasm and steadfastness, their achievements have been altogether astonishing. More particularly in regard to intricate mechanical work is their record remarkable and unexpected.

# Dangers in the Misuse of the Women-Power of the State

But there is also a darker side to the picture. "We have always been among those who have held that there is no physical

barrier in the way of a great extension of women's work," says the London Nation (November 4, 1916), "but we confess that; the manual on Woman's War Work, recently issued by the British War Office, takes our breath away. There are photographs of a woman-stoker, working at the furnaces of a large factory in South London, and others of women loading and unloading and stacking pit-props and coal, which seem to us cases for immediate investigation by the Home Office inspectors. Surely the Home Office does not give its official commendation to the employment of women on such jobs as these." The percentage of loss from overstrain, illness, wounds and even death, as a result of the employment of women in factories dedicated to the manufacture of explosives, and similar occupations to which their physical fitness is more than questionable, whatever the degree of their good will, is mounting dangerously.

Moreover, "the health guards, enforced by law in normal, times, are now to a large extent broken down," declares R. A. Bray, Chairman of the Juvenile Advisory Committee. "In many cases where girls have been called to replace boys they are called on to perform duties for which they are physically unfit, and the same is, of course, true of adult women." Only time can tell what the result will be of so widespread a disregard of health. "It is among the women who have come forward and relieved male labor to so appreciable an extent," says the London Lancet, "that the first effects of drastic recruiting will be seen."

Undoubtedly, as a result of the tremendous military pressure brought to bear, and the consequent lack of time for reflection, all the European countries at war have gone to extremes in making use of the woman power of the nation; and efforts are now being put forth to correct the mistake and to apply scientific and humane principles in the allotment of tasks and to the management of woman labor. Whole series of pamphlets are being issued in which the substitution of women for men is made the subject of a careful consideration as to suitability and conditions, based largely upon the judgment of factory inspectors and other qualified investigators. Unfortunately, these efforts are being seriously thwarted and grave difficulties are being encountered by the attitude of employers and of the women themselves, who, in many cases, are totally disregarding the warnings given them by responsible civil government departments.

All this should inspire grave consideration in America. Thus far, fortunately for us and our future, and despite the sensational and wholly unwarranted illustrations in public prints and films representing American women in steel mills, foundries and cordite factories, our women have not been driven by stress of war needs to take the place of men in work with which they are too handicapped physically to adequately cope.

#### Bulletins Received

"Three Short Courses in Home Making," by Carrie Alberta Lyford, specialist in Home Economics, Bureau of Education, has been prepared for use in the elementary rural schools. It is not a complete outline of the subjects with which it deals but rather indicates a few of the important phases of food study, sewing and care of the home with which the girl in the elementary school should become familiar.

Additional copies of this publication may be procured from the superintendent of documents, Government Printing Office, Washington, D. C., at 15 cents per copy.

"Development of Arithmetic as a School Subject," by Walter Scott Monroe, Professor of School Administration, Kansas State Normal School.

"Reorganization of English in Secondary Schools" is a report by The National Joint Committee on English Representing the Commission on the Reorganization of Secondary Education of the National Educational Association and the National Council of Teachers of English, compiled by James Fleming Hosic, chairman of the Committee.

Additional copies of these publications may be procured from the superintendent of documents, Government Printing Office, Washington, D. C., at 20 cents per copy.

# WHAT DETERMINES HUMAN VALUE?

"A man who at the age of 65 years is still thinking for himself is worth more than ever, while the man who at the same age ceased making new ideas for himself is worse than useless."—Dr. A. Ross Hill, President of the University of Missouri.

#### OUTLINE OF COURSE AT NEW YORK UNIVERSITY

Committee on "Training Educational Directors" Reports to the Executive Committee, Giving an Outline of the Course Inaugurated for Training Industrial Educational Directors, in Which Matter Our Association Assumed the Initiative.

Report of the Committee on Training "Educational Directors" to the Executive Committee:

Following some preliminary correspondence during the summer, the first meeting was held in the office of Mr. Henderschott, Tuesday morning, September 4, 1917.

Mr. Henderschott presented an outline of the proposed course covering some twenty pages and going extensively into the details of the sub-divisions. The main divisions are as follows:

- A. Classifying employes to determine the number and the kinds of courses necessary to properly meet the training requirements of a given corporation.
- B. Preparing a report of this classification for the corporation officials.
- C. Organizing and instituting preliminary educational courses to meet the immediate need-instructors, rooms, equipment, text-books, hours for classes, methods of instruction.
- D. Developing and extending the educational work including co-operation with the established educational institutions of the community.
- E. Character building; how the individual may develop his natural characteristics.
- F. Correlating the educational work with employment, safety and welfare activities.
- G. Systems of keeping personal records. Systematic promotion and discharge.
- Following each employe after completing formal training through alumni associations where enough employes have graduated to justify it.
- Special lectures.
- J. Vocational guidance.

This course will be offered together with four other courses which are now among the standard courses regularly offered by New York University. These four courses are as follows:

- 1. Methods of Teaching.
- 2. Educational Psychology.

- 3. Labor Management.
- Advanced Business Management.

The following is the general scheme of operation:

- 1. New York University will offer the course.
- 2. Offered as a one-year course.
- 3. Offered in the evening from 7.45 to 9.45.
- 4. Dr. Galloway, in charge of the Business Management Department of the University, will have general supervision of the course.
- 5. Mr. Henderschott will have direct charge of the new part of the course which is being developed. This course will be given in a series of lectures occurring one evening per week (Tuesday evening). Mr. Hender-

schott will give these lectures in the main but he may call for assistance in some lines from some of the other. members of our Association.

- 6. The Association will be under no financial obligation whatsoever, but is under moral obligation in view of its original request to New York University to do the work and in view of the need for men so trained.
- 7. Enrollment may be made direct to New York University until October 20th. Course starts October 2d.

The committee as a whole will follow this experiment at New York University very closely.

The committee will also advise as to the practicability of establishing similar courses in universities in other sections of the United States. It is hoped that some of these courses may be inaugurated next year.

> C. R. Dooley, Chairman, DR. LEE GALLOWAY. F. C. HENDERSCHOTT.

There is no way of permanently settling any great question involving the welfare of human kind except on the basis of right and justice. Position, wealth, influence, laws, are helpless as a means of establishing a rule of human conduct, unless supported by principles of justice and righteousness. -Elbert H. Gary, Chairman Executive Committee United States Steel Corporation.

# **NEWS ITEMS ABOUT OUR MEMBERS**

Personal Relations Activities of the Commonwealth Steel Company-Mr. Dooley's Report to Major King-Some of Our Members Drafted Into Service at Cantonment Camps-Proceedings of the Buffalo Convention Available in October-Thrift Club of The Burrough Adding Machine Company and Group Insurance Plan of the Same Company-Service Record of Employes of The Graton & Knight Company-The Schwarzenbach-Huber Company Inaugurate a Continuation School-Western Electric Company's Educational System.

The following companies which have class A membership in our Association have furnished news items for this issue of the BULLETIN:

The Commonwealth Steel Company.

The Burroughs Adding Machine Company.

The Graton & Knight Manufacturing Company.

The Schwarzenbach-Huber Company.

Western Electric Company, Inc.

Pennsylvania Railroad Company.

International Harvester Company.

Western Union Telegraph Company.

The Goodyear Tire & Rubber Company.

Eastman Kodak Company.

The American Locomotive Company.

The Equitable Life Assurance Society.

The New York Telephone Company.

#### Personal Relations Activities of the Commonwealth Steel Company

Information furnished by L. W. George, Supervisor Educational Department.

"Our Plant recently changed shifts from two 9-hour shifts to three 8-hour shifts. This arrangement disorganized our school hours which were formerly from 8:00 to 4:30 daily. Young men

going on the 3—11 shift report for school at 10:00 A. M. four hours. Those on the 7—3 shift report at 3:30 to 5:30 two days each week. Those on the 11—7 shift report for school work from 6:30 to 10:30.

This year our school work will be available to every man in the Plant without regard to age, men going on their own time and reporting for school work as much as they please. Four hours each week is the minimum amount of time required, however. This change was forced by the constant demand from older shop men for special instruction.

A particular feature of our work this year will be the Unit Course. This makes it possible for a shop man to meet his immediate needs without compelling him to take a complete course. A list of Unit Courses is attached."

#### UNIT COURSES

These courses are open to any and every man in the Plant. A Unit Course consists of a single subject. If a student feels the need of a review in decimals there is no reason why he should be required to study the entire Arithmetic. The same is true of other subjects.

Tests are given to ascertain the student's understanding of the subject and a grade of 90 per cent. is required.

Students are required to spend four hours per week in school. This may be divided into two 2-hour periods or four 1-hour periods.

#### Arithmetic:

Fractions. Decimals. Percentage, Ratio and Proportion, Circumference of circles. Cutting and Grinding Speeds, Pulley and gear trains, change gears, Areas and volumes of simple figures, Square and cube root, Mathematical tables, How to use, Levers. Tackle blocks. The inclined plane and screw, work, power and energy, Horsepower of belting, Horsepower of engines,

Mechanics of Fluids, Heat. Strength of Materials.

Advanced Shop Mathematics:

Reading and construction of formulas, Algebra, Geometry, Trigonometry, Logarithms.

#### Mechanical Drawing:

Sections. Gears and calculations. Isometric Drawing, Development of surfaces, Drawing for Machinists, Drawing for Patternmakers, Drawing for Electrical Workers, Drawing for Molders, Reading, blue prints.

#### Miscellaneous:

Free hand drawing. Spelling, Penmanship, Letter Writing, Business Arithmetic, Elementary Accounts. Elementary Mechanics, Elements of Electricity, Slide Rule.

#### REDUCING ACCIDENTS DURING HOT WEATHER PERIOD

Carl L. Smith, Supervisor of the Safety Fellowship Department, advises Mr. George the problem of preventing accidents during the hot summer months has always been one that has occasioned considerable thought on the part of large corporations, and especially the men who have charge of Accident Prevention in these institutions.

Our accidents in 1916 were heavier during the hot summer months than at any time during that year, although we had a fairly steady working force employed of about 2,260 men.

In 1917 for the same months, we employed some 2,530 men and the class of men were more deficient than the previous year,

and our turnover greater, which, of course, is occasioned by general conditions existing over the country at this time.

Naturally, we would think in analyzing our accidents with these confronting conditions this year, that we would have more accidents than we had last year during the hot weather. However, in analyzing our accident situation for the hot months this year we find that this is not the case but, rather, we have a decided decrease in accidents, which is in some ways remarkable.

For your information I quote you the comparative record showing number of accidents occurring during this period.

1916	1917
No. of Accidents	No. of Accidents
April 57	44
May 73	42
June102	28
July 94	33
August 66	16 (to date)
	4.00
392	163

You will see by this comparison that we reduced our accidents during the hot weather 229 over last year.

> CARL L. SMITH, Supervisor, Safety & Fellowship Department.

# Mr. Dooley's Report to Major King

MAJOR EDGAR KING, Mills Building, Washington, D. C.

At the meeting of the Executive Committee of The National Association of Corporation Schools held in New York, Tuesday afternoon, September 4th, I presented your cause as follows:

"The Government has directed Major Edgar King to supervise the re-habilitation and re-education of wounded soldiers. This work will include:

- 1. Construction of proper hospitals.
- 2. Reception of soldiers at the docks.
- 3. Medical treatment involving some preliminary vocational instruction and adaptation.
- 4. Definite vocational instruction instituted in small shops in connection with hospitals and continued at the places of employment throughout the United States

In developing this co-operation among the various industries of the United States, Major King directed me to inquire to what extent The National Association of Corporation Schools could and would co-operate."

The Executive Committee of The National Association of

Corporation Schools directed me to reply as follows:

Approve your general plan and are not only willing, but anxious to help you carry it out in any way within our power. At the annual convention in Buffalo, June 5-8, our Association sent a resolution to President Wilson offering our services in any capacity he saw fit. So far no definite requests have been made upon us by any branch of the Government.

At any time you see fit to put a definite problem to our Association, in relation to this problem, the Officers of the Association will be glad to confer with you and give you every possible assistance.

In this connection, of course, you understand that the Association has no actual authority over its members.

C. R. DOOLEY.

#### Members Drafted Into Service at Cantonment Camps

The United States Government has placed Walter Dill Scott at the head of a movement designed to place soldiers in the new national army now being assembled at the cantonment camps, in the particular divisions of the army for which their educational experience has best qualified them. At each cantonment camp there will be a civilian member who will co-operate with certain army officials in this work. So far as the BULLETIN had been advised at the time copy for the October issue was forwarded to the printer, President Dietz, C. R. Dooley, of the Westinghouse Electric & Manufacturing Company, N. F. Dougherty, of the Pennsylvania Railroad Company and Philip Brasher, of the Winchester Repeating Arms Company, had been drafted into this service and assigned to duty. Mr. Dooley will be at a camp at Chillicothe, Ohio, and Mr. Brasher at Camp Jackson, Columbia, S. C. Undoubtedly other members of our Association will also be drafted into this service.

# Proceedings of the Buffalo Convention

Bound volumes of the proceedings of the Buffalo Convention will probably be forwarded to all our members about the last week in October. The volume this year will be large as the plan under which the convention was conducted provided for no set speeches or addresses except at the banquet. The entire four days including the Round Tables in the evenings were given over to discussion. There is a vast wealth of information of value in the proceedings and the volume is being issued just as rapidly as the work can be accomplished.

# Group Insurance Plan of the Burroughs Adding Machine Company

E. D. SHAW

The group insurance plan of the Burroughs Adding Machine Company has been in effect since December, 1915. Any employe who has been continuously in the service of our Company for one year, is qualified to benefit to the extent of a continuation of his pay for twenty weeks after death. This is increased by two for each additional year of his service. There is also a disability clause which provides for payment of approximately 8 per cent. for a period of twenty years, and should death ensue in the interim, the entire unpaid balance of the policy will be made to the beneficiary. Employes are permitted to take out additional insurance not to exceed \$3,000, at the Company's rate, and have the privilege of conversion should they leave the service, by paying the regular rate of insurance less what amount the company shall have paid.

Claims for 1916 were paid totaling nearly \$10,000. Our premiums, I believe, were slightly in excess of \$11,000.

When this plan was first introduced, there was some dissatisfaction expressed throughout the factory due to the fact that our people has been receiving a day's pay as a Christmas present. The insurance policy was substituted at a far greater expense to the Company. I believe time, however, has proven to the people the very great benefit to be derived from this and the value of protection to their families, because we find people who newly become eligible very anxious indeed to get their policies.

# Inaugurating a Continuation School in the Schwarzenbach-Huber Plant at Altoona, Pennsylvania

The Altoona, Pennsylvania, *Tribune* in a recent article states that the Schwarzenbach-Huber Company, owners of the Altoona Silk Mills and class A members in our Association, have requested the Altoona School Board to co-operate in a plan to put a practical continuation school in their plants in that city.

The request forwarded to Secretary C. M. Piper, and which has been considered by Superintendent S. H. Layton, suggests a plan by which the corporation furnishes the school room with light, heat and supplies. The district is simply asked to supply a teacher and, under the direction of the superintendent, map out a course of study.

The company suggests that a special course of study be arranged. This would be drawn up with the idea in view of directly preparing or training the student to be an efficient and capable assistant in the plant. Such a plan could easily be followed, the pupils receiving substantially the same courses as far as the common English branches are concerned, with the introduction of special elementary courses that would train them for greater efficiency in their line of work.

The matter was brought up and considered briefly at the special meeting of the school board. A tentative suggestion of Mr. Hoover's was one by which the district would need to furnish only one teacher.

All those pupils under 16, who have working certificates and are compelled under the state law to attend a continuation school. would be students at the rooms.

The matter was left in the hands of Superintendent S. H. Layton, who was directed to make all investigations into the practicability of the plan and submit recommendations to the board.

# Western Electric Company's Educational System

(Reprinted from Western Electric News)

Getting the right people into the right jobs and the wrong people out of the wrong jobs is an important part of every executive's work. The Western Electric Company recognizes it as just as much a part of its business as making telephone and cable and switchboards and then selling them. The Company's educational department, the training organizations at Hawthorne and in the engineering department at New York, the installation schools in the principal cities, the employment departmentsthese are all parts of the company's organization which are trying to get us into the places where we can get the most fun out of our every-day jobs and render the best service.

Back of these departments which have the responsibility for putting the plans into effect is a system of advisory committees. You might call them the "school boards" for the company and the general departments. Let's see what is expected of them.

The whole system heads up through Vice-President Halligan. who appoints the company's general educational committee. This plan has grown out of the company's experience extending over a number of years. Those have been extended gradually so that now the training and development of employes in all phases of the company's business is looked upon as a distinct and vital part of the company's work. At the present time the company's general educational committee is made up of representatives of the General Manufacturing, Engineering and General Sales Departments. R. C. Dodd, Operating Superintendent, is Chairman, and J. W. Dietz, Educational Director, serves as Secretary and gives his full time to the work. Other committee members are: I. Danner, Equipment Engineer, and R. L. Jones, Transmission Engineer, representing the Engineering Department; J. J. Garvey, Works Training Department, and Mr. Dodd, representing the General Manufacturing Department; and from the General Sales Department, E. A. Hawkins, Telephone Sales Manager, and P. L. Thomson, Advertising Manager.

The following outline gives an idea of the duties and scope of the committee's work:

- To make recommendations regarding the Company's educational policies and methods.
- To direct the educational courses so that they are arranged and correlated with regard to the requirements of all departments.
- 3. To maintain relations with educational institutions so that we may secure a fair share of the desirable graduates.
- 4. To co-operate with the foreign houses in carrying on similar work abroad.
- 5. To study matters of interest in connection with industrial and commercial education.

There are in each general department a great many problems similar to the ones which come before the general company committee, but of interest only to the department. These matters are dealt with by educational committees of the department. In order that the work of these committees be properly correlated, the members of the Company general committee serve also on the departmental committees. The sorts of problems which they take up are best shown by the instructions which have been issued to them:

1. To study the various educational needs of the branches of their department.

- 2. To make recommendations regarding the department's educational policies and methods.
- 3. To make recommendations regarding the education and development of employes through instruction, lines of promotion or transfers.
- 4. To co-operate with and recommend to the Company's general educational committee in such matters as affect the Company as a whole.
- 5. To maintain relations with local educational institutions of less than college grade so that we may secure a fair share of the desirable graduates.

Broadly, three kinds of educational matters will come before these committees:

First—Regarding required instruction or training which is deemed necessary for the proper performance of the Company's duties or such educational work as is carried on during regular working hours and at the Company's expense. This instruction may embrace work along either general or specific lines.

Second—Regarding voluntary instruction or training which is considered advisable and desirable for the employes, and which is entered into by them on their own initiative.

Third—Plans carried on in co-operation with public educational institutions.

These committees and the Company's plans for carrying out the plans and policies agreed upon make a very complete and effective organization for working out the training of employes in ways which are good for both the men and the Company.

At Hawthorne, the members of the Hawthorne Club will soon be starting the fifth year of their evening classes. There will be classes in drawing where one may learn to make shop sketches and get more familiar with the reading of blueprints. Problems in mathematics and mechanics just like those that come up every day in the shops and offices are studied with the help of experienced instructors. Other groups study typewriting, electricity and magnetism, telephone practice. Many have found the classes in English, manufacturing principles and production methods helpful and interesting. Over 800 Hawthorne employes took advantage of these courses last year.

# Pennsylvania Railroad to Care for Employes' Liberty Loan Bonds

More than 53,000 employes of the Pennsylvania Railroad who subscribed to the Liberty Loan need not worry about finding

a safe place for their bonds. James F. Fahnestock, the Treasurer, has announced that arrangements have been made for the company to act as custodian. Interest will be collected for the employes as it falls due, June 15th and December 15th of each year, and will be added to the pay rolls. About 10 per cent. of the \$3,500,000 of bonds subscribed have been paid in full, and the remainder were purchased under a partial payment plan.

## A Patriotic Service

(From the Pace Student)

One of the many big corporations actively promoting the public weal in these trying times is the International Harvester Company. The entire field-force of this organization has received instructions to aid farmers in enlarging the acreage planted and increasing the yield. Salesmen are directed not to advise purchase of new machines to replace machines which can be properly repaired, and instructions have been given that repair parts are to be furnished as quickly as possible to those needing them.

Further recognition of the need of preventing a crop shortage is evidenced in the publication, by this company, of a pamphlet on the subject of teaching agriculture. This pamphlet is sent free to all teachers who are interested.

# Graton & Knight Manufacturing Company Have Two Hundred and Fifty Employes with a Record of Ten Years or More of Continuous Service

#### L. O. ATHERTON

A certain famous business house has as its motto: "Keeping Everlastingly At It Brings Success." Evidence is plentiful that the motto works out true.

Ninety-five out of every hundred successful men forty-five years of age and upward owe their success to choosing a certain line of work when they are young and sticking to that work year after year, until they are masters of it. On the other hand, probably seventy-five out of every hundred unsuccessful men of forty-five and upward will tell us their failure has come about either from a poor choice of work early in life or through shifting from one thing to another until they are middle-aged without mastering one line. Every sane man wants to succeed.

The following table shows the length of service with Graton & Knight, of 1,943 men on our factory, foremen and office pay rolls, June 30, 1917:

Worked here	No. of Men	Per Cent
Less than 2 weeks	102	5.25
2 weeks-51 weeks	663	34.12
1 year-4 years	743	38.24
5 years—9 years	180	9.26
10 years—14 years	97	4.99
15 years—19 years		3.50
20 years—24 years	36	1.86
25 years—29 years		1.65
30 years—34 years		0.72
35 years—39 years		0.36
40 years	1	0.05
		T
	1,943	

## Western Union Offers Free Technical Course

"Western Union Service as a Career," is the title of an illustrated booklet just issued by the Western Union Telegraph Company in an effort to bring the telegraph service to the attention of many young people looking about for a permanent vocation.

Time and money are spent by young men and women in taking expensive courses in telegraphy. The Western Union maintains operating schools thoroughly equipped with modern apparatus, conducted by competent instructors, and in which students receive careful, personal instruction free.

The Western Union, says the pamphlet, offers permanent employment in positions for which previous education and experience have fitted them, and opportunities for advancement to more responsible and remunerative duties.

# Courses in the Goodyear Factory School

The Goodyear Tire & Rubber Company announces the fall term of its factory school was opened on September 17th. The following subjects are offered:

Business English, Business Arithmetic, Business Law and Corporation Finance, Public Speaking, Alexander Hamilton Business Course, Mechanical Drawing.

New classes in other subjects will be organized in the near future.

"The call today all over the country is for trained, educated men, and national leaders are urging every one, young and old, to continue their education. The Goodyear offers you this opportunity right here in your own factory without any expense to you."

## NOTES

The factory school of the Goodyear Tire & Rubber Company has inaugurated classes in Spanish. Over seventy students attended the first session.

The Goodyear Tire & Rubber Company has conducted a campaign through its educational department the object of which has been to make citizens of the aliens employed by that company. As a result nearly three hundred have signified a desire to secure their first papers.

The Eastman Kodak Company pays tuition for any employe who desires to attend Mechanic Institute at Rochester, and during the past year seventy-two employes took advantage of this offer, fifty-five of which completed their work satisfactorily. The plan will be continued for another year.

F. H. Dodge, class A representative of the Burroughs Adding Machine Company in our Association, has been promoted to the position of Director of Sales of his company. This is a well earned and deserved promotion. Mr. Dodge has been one of the most consistent champions of our Association and his promotion will be welcome news to his many friends. Mr. E. D. Shaw, who has been Educational Director for the Burroughs Adding Machine Company, is also advanced to a more important position in the sales division, although Mr. Shaw will continue in charge of educational activities. Mr. Shaw has attended the conventions of our Association and is well known to most of our members.

L. O. Atherton, formerly of Swift & Company but now connected with the Graton & Knight Manufacturing Company of Worcester, Massachusetts, is interested in the establishment of a personal record system. Mr. Atherton has copies of the personal record blanks of the New York Edison Company and also of the Larkin Company, but would like to hear from any other members who have personal record systems.

The American Locomotive Company, through its house organ the *Headlight*, is conducting a strong and intelligent campaign against accidents. The results are gratifying as injury cases show a steady decrease.

General T. Coleman du Pont, President of the Equitable Life Assurance Society, seeks three qualities which determine promotion. They are honesty, punctuality and straighforwardness.

The Pennsylvania Railroad System announces that in excess of 2,500 of its employes have volunteered for military service either in the army or the navy. Of this number 77 have been commissioned officers and 30 are students at the various officer's training camps. Three thousand additional employes will go with the first draft and fifty-seven thousand other employes are liable to military service.

Two hundred and fifty employes of the Commonwealth Steel Company have organized the Water Wagon Club "for the purpose of combating the evil of drink, which is the cause of the downfall of many good men and which is bringing suffering and hardships into the homes of many of our acquaintances."

Several of the large rubber companies, including the Goodyear and Goodrich of Akron, Ohio, have established thirty scholarships on behalf of their employes in the Engineering College of the Municipal University of that city.

Chairman Sydney W. Ashe held a meeting of the Committee on Health Education in New York, during the annual convention of the National Safety Council in September. The work of the committee was carefully mapped out, which will culminate in its report to the Chicago Convention.

Chairman F. P. Pitzer, of the Sub-Committee on Employment, will call a meeting of this committee early in October, at which time the work of the committee will be determined.

One hundred and eighty of the employes of the New York Telephone Company are members of the Second Telegraph Battalion, S. C. U. S. R.

Miss Harriet R. Fox, Chairman of the Retail Salesmanship Section of the Committee on Marketing, has called her committee to meet in New York on October 20th, at which time plans for the committee's work, prior to the Chicago Convention, will be perfected.

Our members will learn with deep sorrow of the death of Mr. Robert J. Watson, of the Westinghouse Electric and Manufacturing Company. Prior to the Buffalo Convention Mr. Watson was a familiar figure at the annual conventions. Ill health prevented his attendance at the Buffalo meeting. Mr. Watson was at the head of the Trade Apprentice Courses of his Company, having been a member of the Educational Department since 1909. He was a lovable character and a general favorite with all our members. Mr. Carl S. Coler, formerly of the Casino Technical Night School, has been appointed to succeed Mr. Watson.

# Dentistry as an Aid to the Health of Workers

On October 22d, the National Dental Association will open a five-day convention in New York City. October 24th has been set aside as the day on which "industrial dentistry" will be discussed. The session will be held in the auditorium of the Metropolitan Life Insurance Company at 1 Madison Avenue and will commence at 1.30 p. m.

Mr. Arthur Williams, past-president of our Association, will deliver the opening address on this day, having as his subject "Industry and the Health of the Employe." The balance of the program will be as follows:

Dr. Weston D. Price, President, Research Institute of the National Dental Association, Cleveland, Ohio—"The Effect of Dental Infection Upon the Efficiency of the Worker." (Illustrated by motion pictures.)

Dr. T. P. Hyatt, Dental Director, Metropolitan Life Insurance Co., New York City, N. Y.—"The Economic Value of the Industrial Dental Clinic."

Mr. William R. Defield, Montgomery Ward & Co., Chicago, Ill.—"The Dental Clinic in the Factory."

Dr. W. A. Brierly, Chief Dental Surgeon, Colorado Fuel and Iron Co., Denver, Colorado—"Dental Service in the Mining Camps."

Dr. Albert H. Stevenson, Chairman of the Local Committee on Arrangements, has extended a cordial invitation to all our members and to those interested in the subject to be present at this session. The industrial dental clinics in operation in New York City will be open for inspection on the morning of this session, and a tour of them is planned. Dr. Stevenson's address is 576 Fifth Avenue, New York City.

# NEW BOOKS WHICH MAY INTEREST OUR MEMBERS

"How to Live," by Irving Fisher and Eugene Lyman Fisk. Published by Funk & Wagnalls Company, New York. Price, \$1.00.

This book is now in its eleventh edition and is already familiar to many of the readers of the BULLETIN, but is reviewed because of its value to industrial corporations in their educational efforts to preserve and maintain the health of their employes.

Irving Fisher is Professor of Political Economy at Yale University and is collaborating with Dr. Fisk who is Medical Director of the Life Extension Institute, Inc. To the work of the Institute ex-President Taft has contributed materially and the whole movement may be expressed as an effort to eradicate disease in its earlier stages to the end that there may be longer life and greater happiness among the peoples of our country. The purpose of the book is to spread knowledge of individual hygiene. This may be done in three ways:

(1) To provide the individual and the physician with the latest and best conclusions on individual hygiene; (2) to ascertain the exact and special needs of the individual through periodic health examinations; (3) to induce all persons who are found to be in need of medical attention to visit their physicians.

The books deals with problems which indirectly influence health, such as poor air, food, poisons, exercise, etc. It is undoubtedly a valuable contribution to the cause of good health and especially health among industrial workers.

"Making More Money in Storekeeping," by W. R. Hotchkin, Published by The Ronald Press Company, New York. Price, \$3.00.

Mr. Hotchkin is not unknown to those of our members who are interested in retailing merchandise, as for ten years he was advertising and sales manager for John Wanamaker and three years advertising manager of Gimbel Brothers, New York.

There are few, if any, better qualified to write on the subject of this book. Today merchandising is becoming a science. The haphazard methods of the past are rapidly disappearing and the purchaser today goes to the store with full confidence in not only the goods but also in the service—which is so important a feature in the modern efficient store.

The object of the book is to stimulate merchants and all ambitious employes to more aggressive, intelligent daily effort. Price as a sales inducement is gradually giving way to service and character.

The book does not present mere theories and opinions. It goes into its subject exhaustively and in detail. It is a valuable contribution to retail selling. Many who are not directly interested in storekeeping will find the principles and philosophy as set forth in this book worthy of study.

## A Movement to Aid Traffic During the War

Mr. A. L. Salt, Vice-President and General Purchasing Agent of the Western Electric Company, advises the Bulletin that the Freight Car Thrift Committee of the Railway Business Association has well under way a movement for conserving car space to be brought about by fuller loading of cars and minimum delay in loading and unloading.

They have issued a form that aids the shipper and consignee to keep a systematic check on their carload traffic, enabling the very best results to be obtained. A number of trade bodies have recommended the use of these car thrift forms, and I am wondering what steps, if any, our Association has taken to inform its members of this movement and the benefits to be derived therefrom.

The Railway Business Association furnishes national trade bodies without charge sets of the forms in designated quantities, and application for them can be made on George T. Smith, Chairman, 30 Church Street, New York City.

"Knowledge and ability may be likened to a dead dynamo. Unless they are connected with the electromotive force of enthusiasm and the starting switch of initiative they are useless and will lie dormant forever."

As trustee of four or five of the great universities of the United States I was constantly preaching the fact that they must teach democracy, and that the man who heads a great industry is just as much and more educated than the man who has a professional standing in Latin and Greek or mathematics. At Lehigh University this year-we give two honorary degrees each year-I insisted with the trustees, and carried my point, that the two men who should be honored this year should be two great leaders of industry, and not two men who were great because they had become learned in the dead languages or sciences. It will not be long before every university and educational body will realize that those men are the true educators, and educated people and the people at the universities of this country at large ought to recognize and ought to honor them.—CHARLES M. SCHWAB.

## GENERAL EDUCATIONAL NOTES

During the current school year the city of New York will spend \$44,311,367 on its public school system. Of this amount \$560,000 will be spent in physical training and on health subjects. About 800,000 children are enrolled in the schools.

Judge John F. Hylan, Tammany candidate for Mayor of New York, announces as one of his principal campaign issues an attack upon the Gary System as applied to that city's public schools. It is his contention that the Rockefeller Foundation is behind the movement to introduce the Gary Method into the public schools of New York. It is doubtful if the issue will prove effective. Nevertheless, politicians are not slow to seize upon any issue that may be even remotely construed as an effort on the part of wealth to influence the public school system.

Dr. C. A. Prosser, a well-known champion of Industrial Education and Director of the Dunnwoody Institute of Minneapolis, has been appointed Director of Vocational Education under the new Federal Board created by the Smith-Hughes bill. The choice is an excellent one.

With the opening of the Vocational Schools of Buffalo, six courses will be established in them for workmen. In commenting on conditions in that city the Buffalo News says, "The industrial plants of the city are short of skilled mechanics. Hundreds of them are wanted. This condition comes largely of the war. needs of the manufacturers have been brought to the attention of the school board, and it has indorsed a plan which would open the vocational schools to workmen who seek to improve themselves in their trades. It may be that the Buffalo schools will be kept open six days in the week, from early morning until late night, to meet the war emergency. Before the courses of instruction are planned a survey of the industries of the city will be made to determine how best their interests may be served. Such a survey was made recently in New York city by Mr. Wilson at the request of manufacturers. It is expected that most of the information in Buffalo will be gathered by the Chamber of Commerce."

## STANDING COMMITTEES

## Organization and Administration

A. C. VINAL, Chairman.

American Telephone & Telegraph Company, New York, N. Y.

#### Duties:

To determine the best methods of organization of educational work as a function of management in typical instances.

#### Methods of Instruction

J. K. BRUGLER, JR., Chairman. Western Union Telegraph Company, New York, N. Y.

#### Duties:

To further determine the application of the laboratory, library and inspection trip methods.

#### Public Education

Myron J. Jones, General Chairman.

The Sherwin-Williams Company, Cleveland, Ohio.

## Section I-Elementary and Secondary Schools

C. E. SHAW, Chairman. Dennison Manufacturing Company, Framingham, Mass.

#### Duties:

To determine ways by which member companies can best cooperate with these schools.

#### Section II-Continuation Schools

DR. PAUL KREUZPOINTER, Chair-

The Pennsylvania Railroad Company, Altoona, Pa.

#### Duties:

To report on the application of the Smith-Hughes Vocational Educational Law.

#### Health Education

SYDNEY W. ASHE, Chairman. General Electric Company, Pittsfield, Mass.

#### Duties:

To suggest methods of improving the health of employes. Employment

## F. P. PITZER, General Chairman. The Equitable Life Assurance Society, New York, N. Y.

# Section I-Employes Selection and Job Analysis

H. A. Hopf, Chairman.

Phoenix Mutual Life Insurance Company, Hartford, Conn.

## Duties:

To determine how typical clerical and mechanical jobs can be analyzed as an aid in determining the kind of employe desired.

How can employes' fitness for particular typical jobs be determined by tests.

To determine records and organization necessary to best promotions and transfers.

#### Section I-Labor Turnover

E. H. Fish, Chairman. Norton Company, Worcester, Mass.

## Duties:

To determine the best methods of calculating turnover.

To determine that per cent of turnover under typical conditions which can be accepted as normal.

#### Marketing

Dr. LEE GALLOWAY, General Chairman.

New York University, New York, N. Y.

#### Section I-Advertising, Selling and Distribution

Dr. LEE GALLOWAY, Chairman. Duties:

To ascertain what organized training is desirable for those engaged in foreign trades.

## Section II-Retail Salesmanship

MISS HARRIET R. Fox, Chairman. Strawbridge & Clothier, Philadelphia, Pa.

#### Duties:

To determine how to teach a knowledge of merchandise and its uses as a basis of training for better service in retail sell-

#### Office Work Training

R. H. PUFFER, Chairman. Larkin Company, Buffalo, N. Y. Duties:

To determine under what conditions is organized training for office boys, clerks and stenographers advisable.

## Technical and Executive Training KENDALL WEISIGER, General Chairman.

Southern Bell Telephone & Telegraph Company, Atlanta,

#### Section I-Technical

W. M. SKIFF. Chairman.

General Electric Company. Cleveland, Ohio.

#### Duties:

To determine what ways can employers of technical graduates co-operate with technical schools.

#### Section II-Executive

NORMAN COLLYER, Chairman. Southern Pacific Company, San Francisco, California.

#### Duties:

To suggest methods of promotion and training of minor executives in handling men and carrying out company policies.

#### Trade Apprenticeship

F. W. THOMAS, General Chairman.

The Atchison, Topeka & Santa Fe Railroad System, Topeka, Kansas.

#### Section I-Railroads

THOMAS G. GRAY, Chairman.

Southern Pacific Company

Sacramento. Cal.

#### Duties:

To determine what supervision of work is desirable for other than machinist apprentices in railroad shops.

## Section II—Manufacturing

J. J. GARVEY, Chairman.

Western Electric Company,
Inc., Chicago, Ill.

#### Duties:

To ascertain under what conditions is an apprentice instruction shop desirable in a manufacturing plant.

#### Section III—Steel

P. E. WAKEFIELD, Chairman. Carnegie Steel Company, Duquesne, Pa.

#### Duties:

To ascertain what supervision of shop work is desirable for apprentices in steel mills.

#### Unskilled and Semi-skilled Labor

J. E. BANKS, General Chairman. American Bridge Company, Ambridge, Pa.

#### Section I-Unskilled

H. T. WALLER, Chairman.
The B. F. Goodrich Company,
Akron, Ohio.

#### Duties:

To determine best plans for Americanizing the foreign born.

Recommend standard educational programs for American (including negrees) unskilled workmen.

To determine best methods of teaching English to the foreign

#### Section II-Semi-skilled

CARL S. COLER, Chairman.

Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.

#### Duties:

To determine best methods of instruction to bring operators up to standard rates on specific tasks.

#### Local Chapters

JOHN McLEOD, Chairman.

#### Duties:

To be responsible for the relations with the Association's Local Chapters.

To supervise the organization of groups of members into Local Chapters.

To be responsible for the furthering of the Association's interests through the Local Chapters.

## Program

F. C. HENDERSCHOTT, Chairman. The New York Edison Company, New York, N. Y.

#### Duties:

To plan the work, assignments of committees and the convention program.

#### Publications

E. J. Mehren, Chairman. McGraw Hill Publishing Company, New York, N. Y.

#### Duties:

To supervise the Association's publications.

## Membership

W. W. KINCAID, Chairman.

The Spirella Company, Inc.,
Niagara Falls, N. Y.

#### Duties:

To be responsible for getting new

members. To investigate the loss of old members,

# Co-operation with Other Organiza-

Dr. H. M. Rowe, Chairman. The H. M. Rowe Company, Baltimore, Maryland.

#### Duties:

To be responsible for co-operation with other organizations.

## Training Educational Directors

C. R. Dooley, Chairman,

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

## Duties:

To supervise the experimental course arranged with New York University for training educational directors and instructors with a view to developing similar plans at other educational institutions.

#### Nominating

JOHN McLEOD, Chairman. Carnegie Steel Company, Pittsburgh, Pa.

#### Duties:

To nominate candidates for the offices and executive committee as required by the constitution,

# DIRECTORY OF LOCAL CHAPTERS

## Pittsburgh Local Chapter

C. R. Dooley, Chairman.

Westinghouse Electric and Manufacturing Company.

P. E. WAKEFIELD, Secretary-Treasurer, Carnegie Steel Company, Duquesne, Pa.

# New York Local Chapter

JOHN T. SCANLON, Chairman,

Standard Fashion Company, New York, N. Y.

C. E. FITZPATRICK, Secretary-Treasurer,

The Charles William Stores, Inc., Brooklyn, N. Y.

# Philadelphia Local Chapter

MONT H. WRIGHT, Chairman,

John B. Stetson Company, Philadelphia, Pa.

N. F. Dougherry, Secretary-Treasurer, The Pennsylvania Railroad Company,

# Chicago Local Chapter

WILLIAM R. DEFIELD, Chairman, Montgomery Ward & Company, Chicago, Ill.

James J. Garvey, Secretary-Treasurer, Western Electric Company, Inc., Hawthorne Station, Chicago, Ill.

## POLICY AND FINANCE COMMITTEE

ARTHUR WILLIAMS, Chairman, General Commercial Manager The New York Edison Company.

GEORGE 1. ALDEN, President, Norton & Norton Grinding Companies. CLARENCE H. HOWARD, President, Commonwealth Steel Company.

Dr. John Price Jackson, Commissioner of Labor and Industry of Pennsylvania. N. F. Brady, President, The New York Edison Company.

CHANCELLOR E. E. BROWN, New York University.

GEORGE B. CORTELYOU, President, Consolidated Gas Company of New York.

T. E. Donnelley, President, R. R. Donnelley & Sons Company.

Dr. John Finley, Commissioner of Education of New York State.

H. A. HALLIGAN, Vice-President, Western Electric Company, Inc.

Dr. ARTHUR A. HAMERSCHLAG, Director, Carnegie Institute of Technology.

WILLIAM R. HEATH, Vice-President, Larkin Company. N. C. KINGSBURY, Vice-President, American Telephone & Telegraph Co.

C. H. LUDINGTON, Secretary and Treasurer, The Curtis Publishing Company.

M. W. Mix, President,
Dodge Manufacturing Company.

JOHN H. PATTERSON, President, The National Cash Register Company.

James A. Roosevelt, Roosevelt & Thompson.

DR. CHARLES P. STEINMETZ, General Electric Company.

Dr. Herbert J. Tily, General Manager, Strawbridge & Clothier.

JOHN McLeod, Ex-President,
The National Association of Corporation Schools,
Carnegie Steel Company.

F. C. HENDERSCHOTT, Secretary, The New York Edison Company.

## Class "A" Members

ADDRESSOGRAPH COMPANY, GOI-II W. Van Buren Street, Chi-
cago, Ill
AMERICAN BRIDGE COMPANY, Pittsburgh, Pa
AMERICAN HARD RUBBER COMPANY, New York City Mr. S. H. RENTON
AMERICAN HARD RUBBER COMPANY, New YORK City
AMERICAN LOCOMOTIVE COMPANY, Schenectady, N. YMR. L. L. PARK
AMERICAN ROLLING MILL COMPANY, Middletown, OhioMR. CHARLES R. HOOK
AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh, PaMr. J. A. HUNTER
AMERICAN STEEL AND WIRE Co., Worcester, Mass
AMERICAN TELEPHONE AND TELEGRAPH CO., 15 Dey St., N. YMR. K. W. WATERSON
ATCHISON, TOPEKA & SANTA FE RAILWAY CO., Topeka, KanMr. F. W. THOMAS
THE ATLANTIC REFINING COMPANY, Philadelphia, PaMr. J. D. GILL
THE BELL TELEPHONE COMPANY OF PENNSYLVANIA, Philadelphia,
Pa
THE BILTON MACHINE TOOL COMPANY, Bridgeport, ConnMR. C. E. BILTON
THE BRIGHTON MILLS, Passaic, N. I
BURROUGHS ADDING MACHINE Co., Detroit, Mich
CADILLAC MOTOR CAR Co., 1343 Case Ave., Detroit, Mich
CARNEGIE STEEL CO., Pittsburgh, Pa
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